

Teaching for Mastery



Whole-School Mathematics Curriculum Map

Reception – Year 6

2026- 2027

Version 1

Introduction

Purpose of this document

This Whole-School Mathematics Curriculum Map sets out the intended progression of mathematical learning from Reception to Year 6 at Abingdon Primary School. It has been designed to provide a coherent overview of the mathematics curriculum and should be read alongside the Teaching for Mastery: Mathematics Handbook.

The curriculum map has been developed using:

- National Curriculum for England (2014)
- NCETM Curriculum Matching Documents
- NCETM Curriculum Prioritisation Materials
- DfE Ready to Progress Criteria
- NCETM Professional Development Materials

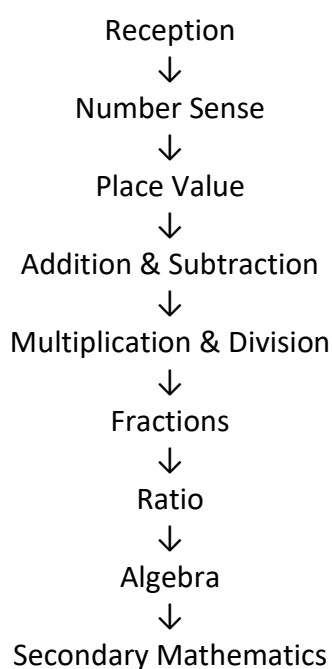
Together, these documents ensure that mathematical concepts are carefully sequenced, connected and taught in sufficient depth to enable all pupils to develop secure understanding.

Curriculum Design Principles

Our curriculum is...

- ✓ **Ambitious** - Every child studies an ambitious mathematics curriculum built upon high expectations.
- ✓ **Coherent** - Learning is sequenced so that every concept builds upon prior knowledge.
- ✓ **Inclusive** - All pupils access the same important mathematical ideas through adaptive teaching.
- ✓ **Connected** - Children make links across mathematical concepts rather than viewing learning as isolated units.
- ✓ **Mastery Focused** - Conceptual understanding is prioritised before procedural fluency.
- ✓ **Evidence Informed** - Curriculum decisions are informed by NCETM guidance and educational research.
- ✓ **Vocabulary Rich** - Precise mathematical language is explicitly taught.
- ✓ **Designed for Depth** - Children deepen understanding before moving to new curriculum content.

Whole School Progression



Running alongside: Geometry, Measures, Statistics, Mathematical Talk, Reasoning and Problem Solving.

Year Group	Mastering Number
Reception	Core approach to early number development
Year 1	Daily 15–20 minute session
Year 2	Daily 15–20 minute session
Year 3	Daily 15–20 minute session
Year 4	Daily 15–20 minute session
Year 5	Number fluency developed through the mathematics curriculum
Year 6	Number fluency developed through the mathematics curriculum

Element	Purpose
Daily Mathematics Lesson (45–60 minutes)	Teach the National Curriculum through the NCETM Teaching for Mastery approach.
Mastering Number (Reception–Year 4, 15–20 minutes)	Develop number sense, fluency and confidence through carefully sequenced daily sessions.
Retrieval and Arithmetic Practice	Consolidate prior learning and strengthen long-term retention through regular review.

Reception

EYFS Mathematics: Number

Numerical Patterns

Children will:

- Count objects, actions and sounds
- Subitise up to 5
- Link the number symbol with its cardinal number value
- Count beyond 10
- Compare numbers
- Understand the one more than / one fewer relationship

Number Composition

Children will:

- Explore the composition of numbers to 10
- Automatically recall number bonds to 5, and some number bonds to 10
- Use part-whole understanding to solve problems

EYFS Mathematics: Numerical Patterns

Children will:

- Verbally count beyond 20
- Compare quantities up to 10 in different contexts, recognising when one quantity is more than, fewer than or the same as the other quantity
- Explore and represent patterns within numbers, including evens and odds, double facts and sharing

EYFS Mathematics: Shape, Space and Measure

Children will:

- Select, rotate and manipulate shapes to develop spatial reasoning
- Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can
- Continue, copy and create repeating patterns
- Compare length, weight and capacity

Term	EYFS focus	Key learning
Autumn 1	Counting, cardinality and comparison	Count objects, subitise to 5, compare sets
Autumn 2	Composition of number	Explore and recall number bonds within 5
Spring 1	Counting and comparison beyond 5	Count, order and compare to 10
Spring 2	Composition within 10	Investigate number bonds and part-whole relationships
Summer 1	Numerical patterns and spatial reasoning	Patterns, doubling, shape and position
Summer 2	Shape, space and measure	Compare, sort, name shapes and measure informally

Teaching and learning are planned in line with the EYFS statutory framework, with progression informed by NCETM mastery principles and Mastering Number.

Year 1		
1	Previous Reception experiences and counting within 100 1NPV-1 Count within 100, forwards and backwards, starting with any number. 1.9 Composition of numbers: 20–100	Number and place value
2	Comparison of quantities and part-whole relationships 1NPV-1 Count within 100, forwards and backwards, starting with any number. 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$. 1.1 Comparison of quantities and measures 1.2 Introducing 'whole' and 'parts': part-part-whole	Number facts
3	Numbers 0 to 5 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$. 1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. 1.3 Composition of numbers: 0–5	Addition and subtraction
4	Recognise, compose, decompose and manipulate 2D and 3D shapes 1G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. 1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.	Multiplication and division
5	Numbers 0 to 10 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$. 1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. 1.4 Composition of numbers: 6–10	Fractions
6	Additive structures 1AS-2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. 1.5 Additive structures: introduction to aggregation and partitioning 1.6 Additive structures: introduction to augmentation and reduction	Geometry
7	Addition and subtraction facts within 10 1NF-1 Develop fluency in addition and subtraction facts within 10. 1.7 Addition and subtraction: strategies within 10	Other
8	Numbers 0 to 20 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$. 1.10 Composition of numbers: 11–19	
9	Unitising and coin recognition 1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers. 2.1 Counting, unitising and coins	
10	Position and direction This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.	
11	Time This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.	

Dark grey references are ready-to-progress criteria from the DfE Guidance 2020

Light grey references are from the NCETM Primary Mastery Professional Development materials

Both are available online

Year 2		
	Numbers 10 to 100	
1	2NPV-1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning. 2NPV-2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. 1.8 Composition of numbers: multiples of 10 up to 100 1.9 Composition of numbers: 20–100	
2	Calculations within 20 2AS-1 Add and subtract across 10. 2AS-2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?". 1.11 Addition and subtraction: bridging 10 1.12 Subtraction as difference	
3	Fluently add and subtract within 10 2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice. 1.7 Addition and subtraction: strategies within 10	
4	Addition and subtraction of two-digit numbers (1) 2AS-3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. 1.13 Addition and subtraction: two-digit and single-digit numbers 1.14 Addition and subtraction: two-digit numbers and multiples of ten	
5	Introduction to multiplication 2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. 2.2 Structures: multiplication representing equal groups 2.3 Times tables: groups of 2 and commutativity (part 1) 2.4 Times tables: groups of 10 and of 5, and factors of 0 and 1 2.5 Commutativity (part 2), doubling and halving	
6	Introduction to division structures 2MD-2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division). 2.6 Structures: quotitive and partitive division	
7	Shape 2G-1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.	
8	Addition and subtraction of two-digit numbers (2) 2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. 1.15 Addition: two-digit and two-digit numbers 1.16 Subtraction: two-digit and two-digit numbers	
9	Money This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.	
10	Fractions 3.0 Guidance on the teaching of fractions in Key Stage 1	
11	Time This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.	
12	Position and direction This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.	
13	Multiplication and division – doubling, halving, quotitive and partitive division 2.5 Commutativity (part 2), doubling and halving 2.6 Structures: quotitive and partitive division	
14	Sense of measure – capacity, volume, mass This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.	

	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

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Year 3		
1	Adding and subtracting across 10	Number and place value
	2AS-1 Add and subtract across 10. 3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. 1.11 Addition and subtraction: bridging 10	Number facts
2	Numbers to 1,000	Addition and subtraction
	3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning. 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. 3AS-1 Calculate complements to 100. 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). 1.17 Composition and calculation: 100 and bridging 100 1.18 Composition and calculation: three-digit numbers	Multiplication and division
3	Right angles	Fractions
	3G-1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.	Geometry
4	Manipulating the additive relationship and securing mental calculation	Other
	3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction. 1.19 Securing mental strategies: calculation up to 999	
5	Column addition	
	3AS-2 Add and subtract up to three-digit numbers using columnar methods. 1.20 Algorithms: column addition	
6	2, 4, 8 times tables	
	3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division. 3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number. 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). 2.7 Times tables: 2, 4 and 8, and the relationship between them	
7	Column subtraction	
	3AS-2 Add and subtract up to three-digit numbers using columnar methods. 1.21 Algorithms: column subtraction	
8	Unit fractions	
	3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency). 3.1 Preparing for fractions: the part-whole relationship 3.2 Unit fractions: identifying, representing and comparing	
9	Non-unit fractions	
	3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F-3 Reason about the location of any fraction within 1 in the linear number system. 3F-4 Add and subtract fractions with the same denominator, within 1. 3.3 Non-unit fractions: identifying, representing and comparing 3.4 Adding and subtracting within one whole	
10	Parallel and perpendicular sides in polygons	
	3G-2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.	
11	Time	
	This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.	

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Year 4		
1	Review of column addition and subtraction 3AS-2 Add and subtract up to three-digit numbers using columnar methods. 1.20 Algorithms: column addition 1.21 Algorithms: column subtraction	Number and place value
2	Numbers to 10,000 4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. 4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning. 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each. 4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts. 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100). 1.22 Composition and calculation: 1,000 and four-digit numbers	Number facts
3	Perimeter 4G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. 2.16 Multiplicative contexts: area and perimeter 1	Addition and subtraction
4	3, 6, 9 times tables 4NF-1 Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number. 2.8 Times tables: 3, 6 and 9, and the relationship between them	Multiplication and division
5	7 times table and patterns 4NF-1 Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number. 2.9 Times tables: 7 and patterns within/across times tables	Fractions
6	Understanding and manipulating multiplicative relationships 4MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. 4MD-2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. 4MD-3 Understand and apply the distributive property of multiplication. 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100) 2.10 Connecting multiplication and division, and the distributive law 2.13 Calculation: multiplying and dividing by 10 or 100	Geometry
7	Coordinates 4G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	Other
8	Review of fractions 3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3.1 Preparing for fractions: the part-whole relationship	
9	Fractions greater than 1 4F-1 Reason about the location of mixed numbers in the linear number system. 4F-2 Convert mixed numbers to improper fractions and vice versa. 4F-3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers. 3.5 Working across one whole: improper fractions and mixed numbers	
10	Symmetry in 2D shapes 4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.	
11	Time This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.	
12	Division with remainders 4NF-2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders. 2.12 Division with remainders	

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Year 5		
1	Decimal fractions	Number and place value
	- SNPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. - SNPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. - SNPV-3 Reason about the location of any number with up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. - SNPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. - SNF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). 1.23 Composition and calculation: tenths 1.24 Composition and calculation: hundredths and thousandths	Number facts
	Money	Addition and subtraction
	2 1.25 Addition and subtraction: money	Multiplication and division
	Negative numbers	Fractions
3	1.27 Negative numbers: counting, comparing and calculating	Geometry
4	Short multiplication and short division	Other
	- SMD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. - SMD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context. 2.14 Multiplication: partitioning leading to short multiplication 2.15 Division: partitioning leading to short division	
5	Area and scaling	
	5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units. 2.16 Multiplicative contexts: area and perimeter 1 2.17 Structures: using measures and comparison to understand scaling	
6	Calculating with decimal fractions	
	- SMD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. 2.19 Calculation: $\times/\div$ decimal fractions by whole numbers 2.29 Decimal place-value knowledge, multiplication and division	
7	Factors, multiples and primes	
	- SMD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. 2.20 Multiplication with three factors and volume 2.21 Factors, multiples, prime numbers and composite numbers	
8	Fractions	
	- SNPV-5 Convert between units of measure, including using common decimals and fractions. - SF-1 Find non-unit fractions of quantities. - SF-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. - SF-3 Recall decimal fraction equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$, and for multiples of these proper fractions. 3.6 Multiplying whole numbers and fractions 3.7 Finding equivalent fractions and simplifying fractions 3.10 Linking fractions, decimals and percentages	
9	Converting units	
	SNPV-5 Convert between units of measure, including using common decimals and fractions.	
10	Angles	
	5G-1 Compare angles, estimate and measure angles in degrees ($^{\circ}$) and draw angles of a given size.	

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Year 6		
1	Calculating using knowledge of structures (1) 6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 1.28 Common structures and the part-part-whole relationship 1.29 Using equivalence and the compensation property to calculate	Number and place value
2	Multiples of 1,000 1.26 Composition and calculation: multiples of 1,000 up to 1,000,000	Number facts
3	Numbers up to 10,000,000 6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). 6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. 6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. 6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts. 1.30 Composition and calculation: numbers up to 10,000,000	Addition and subtraction
4	Draw, compose and decompose shapes 6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.	Multiplication and division
5	Multiplication and division 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 2.18 Using equivalence to calculate 2.23 Multiplication strategies for larger numbers and long multiplication 2.24 Division: dividing by two-digit divisors 2.25 Using compensation to calculate	Fractions
6	Area, perimeter, position and direction 2.30 Multiplicative contexts: area and perimeter 2	Geometry
7	Fractions and percentages 6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions. 6F-2 Express fractions in a common denominator and use this to compare fractions that are similar in value. 6F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denominator as a comparison strategy. 3.8 Common denominator: more adding and subtracting 3.9 Multiplying fractions and dividing fractions by a whole number 3.10 Linking fractions, decimals and percentages	Other
8	Statistics This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.	
9	Ratio and proportion 6AS/MD-3 Solve problems involving ratio relationships. 2.27 Scale factors, ratio and proportional reasoning	
10	Calculating using knowledge of structures (2) 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 1.29 Using equivalence and the compensation property to calculate	
11	Solving problems with two unknowns 6AS/MD-4 Solve problems with 2 unknowns. 1.31 Problems with two unknowns	
12	Order of operations 2.22 Combining multiplication with addition and subtraction 2.28 Combining division with addition and subtraction	
13	Mean average 2.26 Mean average and equal shares	

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Year 5/6 (Year A) Mixed-age planning materials with guidance

Interactive navigation		Unit	Considerations
		Decimal fractions (NCETM Year 5, Unit 1, 5 weeks) 5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1; Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01; Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. 5NPV-3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. 5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. 5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). 1.23 Composition and calculation: tenths 1.24 Composition and calculation: hundredths and thousandths	This unit is taught in full for all pupils, providing over-learning of the first learning outcomes for older pupils before moving onto new learning outcomes.
1			
2		Money (NCETM Year 5, Unit 2, 2 weeks) 1.25 Addition and subtraction: money	
3		Negative numbers (NCETM Year 5, Unit 3, 2 weeks) 1.27 Negative numbers: counting, comparing and calculating	This unit is taught in full for all pupils in Year A which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year B.
4		Short multiplication and short division (NCETM Year 5, Unit 4, 4 weeks) 5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. 5MD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context. 2.14 Multiplication: partitioning leading to short multiplication 2.15 Division: partitioning leading to short division	
5		Multiplication and division (long multiplication and long division only) (NCETM Year 6, Unit 5, 2 weeks) 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 2.23 Multiplication strategies for larger numbers and long multiplication 2.24 Division: dividing by two-digit divisors	In Year A, multiplication and division is condensed into a two-week introduction and review unit. It is taught in full in Year B; combined, this allows for increased time given to this core concept. Teachers will use their discretion to identify which learning outcomes to use. In Unit 5, some teachers have chosen to cover Learning Outcomes 6-11 and 14-20 (Long Multiplication and Division).
6		Fractions (NCETM Year 5, Unit 8, 5 weeks) 5NPV-5 Convert between units of measure, including using common decimals and fractions. 5F-1 Find non-unit fractions of quantities. 5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. 5F-3 Recall decimal fraction equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$, and for multiples of these proper fractions. 3.6 Multiplying whole numbers and fractions 3.7 Finding equivalent fractions and simplifying fractions 3.10 Linking fractions, decimals and percentages	This unit is taught in full for all pupils, providing over-learning of the first learning outcomes for older pupils before moving onto new learning outcomes.
Number and place value Number facts Addition and subtraction Multiplication and division Fractions Geometry Other			Dark grey references are ready-to-progress criteria from the DfE Guidance 2020 Light grey references are from the NCETM Primary Mastery Professional Development materials Both are available online

Year 5/6 (Year A) Mixed-age planning materials with guidance

Interactive navigation		Unit	Considerations
7	Fractions and percentages (NCETM Year 6, Unit 7, 1 week) 6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions. 6F-2 Express fractions in a common denominator and use this to compare fractions that are similar in value. 6F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denominator as a comparison strategy. 3.8 Common denominator: more adding and subtracting 3.9 Multiplying fractions and dividing fractions by a whole number 3.10 Linking fractions, decimals and percentages		In Year A, Fractions and Percentages is condensed into a one-week introduction and review unit. It is taught in full in Year B; combined, this allows for increased time given to this core concept. Teachers will use their discretion to identify which learning outcomes to use. In Unit 7, some teachers have chosen to cover Learning Outcomes 26-31 (Percentages).
8	Calculating with decimal fractions (NCETM Year 5, Unit 6, 3 weeks) 5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. 2.19 Calculation: $\times/\div$ decimal fractions by whole numbers 2.29 Decimal place-value knowledge, multiplication and division		
9	Area and scaling (NCETM Year 5, Unit 5, 2 weeks) 5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units. 2.16 Multiplicative contexts: area and perimeter 1 2.17 Structures: using measures and comparison to understand scaling		
	Revision for KS2 SATS (including content from Cycle B and light touch converting units of measure and angles) (4 weeks)		
	KS2 SATS (1 week)		
10	Factors, multiples and primes (NCETM Year 5, Unit 7, 3 weeks) 5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. 2.20 Multiplication with three factors and volume 2.21 Factors, multiples, prime numbers and composite numbers		
11	Converting units (NCETM Year 5, Unit 9, 2 weeks) 5NPV-5 Convert between units of measure, including using common decimals and fractions.		
12	Angles (NCETM Year 5, Unit 10, 3 weeks) 5G-1 Compare angles, estimate and measure angles in degrees ($^{\circ}$) and draw angles of a given size.		
Ongoing units			
➤➤	Order of operations (NCETM Year 6, Unit 12) 2.22 Combining multiplication with addition and subtraction 2.28 Combining division with addition and subtraction		This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year A. This unit is taught in full for all pupils in Year B.
➤➤	Solving problems with two unknowns (NCETM Year 6, Unit 11) 6AS/MD-4 Solve problems with 2 unknowns. 1.31 Problems with two unknowns		This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year A. This unit is taught in full for all pupils in Year B.
➤➤	Mean average (NCETM Year 6, Unit 13) 2.26 Mean average and equal shares		This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year A. This unit is taught in full for all pupils in Year B.

Year 5/6 (Year B) Mixed-age planning materials with guidance

Interactive navigation		Unit	Considerations
1	Calculating using knowledge of structures (1) (NCETM Year 6, Unit 1, 4 weeks) 6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 1.28 Common structures and the part-part-whole relationship 1.29 Using equivalence and the compensation property to calculate	This unit is fundamental to build pupils' understanding and application of additive and multiplicative structures. Learning from this unit will be built upon throughout Year 5/6 units.	
2	Multiples of 1,000 (NCETM Year 6, Unit 2, 1 week) 1.26 Composition and calculation: multiples of 1,000 up to 1,000,000	This unit provides pre-requisite knowledge for Unit 3. It also builds on learning from Year 3/4 units: Numbers to 1,000 and Numbers to 10,000.	
3	Numbers up to 10,000,000 (NCETM Year 6, Unit 3, 2 weeks) 6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). 6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. 6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. 6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts. 1.30 Composition and calculation: numbers up to 10,000,000	This unit builds on Year 3 and 4NPV RTP and Unit 2: Multiples of 1,000. There is some reference to tenths in this unit – Year 5 pupils will experience this for the first time, but can draw on knowledge from 4MD-1 to understand in this context.	
4	Decimal fractions (NCETM Year 5, Unit 1, 2 weeks) 5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1; Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01; Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. 1.23 Composition and calculation: tenths 1.24 Composition and calculation: hundredths and thousandths	This unit is taught as an introduction for younger pupils, and a review for older pupils. Teachers will use their discretion to identify which learning outcomes to cover; some teachers have chosen to cover Learning Outcomes 1-10 for Y5 pupils whilst using application contexts covering content from Learning Outcomes 11-25 for Y6 pupils.	
5	Fractions (NCETM Year 5, Unit 8, 2 weeks) 5F-1 Find non-unit fractions of quantities. 3.6 Multiplying whole numbers and fractions	This unit is taught as an introduction for younger pupils, and a review for older pupils. Teachers will use their discretion to identify which learning outcomes to use in this two-week unit: some teachers have chosen to cover Learning Outcomes 1-13 with application contexts for Year 6 pupils.	
6	Multiplication and division (NCETM Year 6, Unit 5, 4 weeks) 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 2.18 Using equivalence to calculate 2.23 Multiplication strategies for larger numbers and long multiplication 2.24 Division: dividing by two-digit divisors 2.25 Using compensation to calculate	This unit is taught in full for all pupils, providing over-learning of the first learning outcomes for older pupils before moving onto new learning outcomes.	
7	Area, perimeter, position and direction (NCETM Year 6, Unit 6, 2 weeks) 2.30 Multiplicative contexts: area and perimeter 2		
Number and place value Number facts Addition and subtraction Multiplication and division Fractions Geometry Other			Anchor unit Ongoing unit Dark grey references are ready-to-progress criteria from the DfE Guidance 2020 Light grey references are from the NCETM Primary Mastery Professional Development materials Both are available online

Year 5/6 (Year B) Mixed-age planning materials with guidance

Interactive navigation		Unit	Considerations
8	Fractions and percentages (NCETM Year 6, Unit 7, 5 weeks) 6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions. 6F-2 Express fractions in a common denominator and use this to compare fractions that are similar in value. 6F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denominator as a comparison strategy. 3.8 Common denominator: more adding and subtracting 3.9 Multiplying fractions and dividing fractions by a whole number 3.10 Linking fractions, decimals and percentages		
9	Statistics (NCETM Year 6, Unit 8, 2 weeks) This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.		
10	Ratio and proportion (NCETM Year 6, Unit 9, 2 weeks) 6AS/MD-3 Solve problems involving ratio relationships. 2.27 Scale factors, ratio and proportional reasoning		
	Revision for KS2 SATS (including content from Cycle A and light touch converting units of measure and angles) (4 weeks)		
	KS2 SATS (1 week)		
11	Mean average (NCETM Year 6, Unit 13, 1 week) 2.26 Mean average and equal shares		This unit is taught in full for all pupils in Year B which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year A.
12	Draw, compose and decompose shapes (NCETM Year 6, Unit 4, 2 weeks) 6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.		
13	Calculating using knowledge of structures (2) (NCETM Year 6, Unit 10, 2 weeks) 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding 1.29 Using equivalence and the compensation property to calculate		
14	Solving problems with two unknowns (NCETM Year 6, Unit 11, 1 week) 6AS/MD-4 Solve problems with 2 unknowns. 1.31 Problems with two unknowns		This unit is taught in full for all pupils in Year B which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year A.
15	Order of operations (NCETM Year 6, Unit 12, 2 weeks) 2.22 Combining multiplication with addition and subtraction 2.28 Combining division with addition and subtraction		This unit is taught in full for all pupils in Year B which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year A.
		Ongoing units	
	Negative numbers (NCETM Year 5, Unit 3) 1.27 Negative numbers: counting, comparing and calculating		This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year B. This unit is taught in full for all pupils in Year A.

						
Number and place value	Addition and subtraction	Fractions	Other	Dark grey references are ready-to-progress criteria from the DfE Guidance 2020	Light grey references are from the NCETM Primary Mastery Professional Development materials	Both are available online
Number facts	Multiplication and division	Geometry				